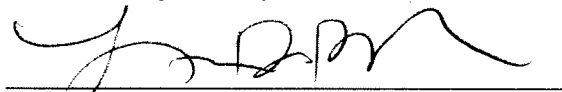


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Signature

Appl No. : 09/775,315 Confirmation No. 8247
Applicant : Hyun-Sook Jung, et al.
Filed : February 1, 2001
Title : POSITIVE ACTIVE MATERIAL FOR RECHARGEABLE LITHIUM
BATTERY AND METHOD OF PREPARING SAME

TC/A.U. : 1795
Examiner : Julian A. Mercado

Docket No. : 41671/P849
Customer No. : 23363

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 7068
Pasadena, CA 91109-7068
June 11, 2008

Commissioner:

Applicant requests review of the continued rejection of claims 1-4 and 11 in the above-identified application. No amendments are being filed with this Request. This Request is being filed with a Notice of Appeal. The review is requested for the reasons stated below.

The examiner maintained the rejection of claim 11 under 35 U.S.C. §103(a) as allegedly obvious over Mayer (U.S. Patent No. 5,783,333). In maintaining this rejection, the examiner asserts that the limitation, "a first binder adapted to be evaporated," is not given patentable weight, and that even if the limitation were given patentable weight, Mayer discloses "a binder such as water is added to the mixture" and then evaporated. March 11, 2008 Final rejection, page 3. Applicant respectfully traverses these arguments.

In failing to give the limitation "a first binder adapted to be evaporated" any patentable weight, the examiner asserts that the binder is ultimately removed from the final product, and

that the limitation renders the claim drawn to an intermediate product. However, as noted in the specification, at page 7, lines 15-18, not all of the binder is evaporated and traces of binder may remain in the chemical mixture. As binder remains in the chemical mixture after evaporation, the recitation of a first binder adapted to be evaporated does not render the claim drawn to an intermediate product. Accordingly, the examiner's failure to give the limitation patentable weight was improper.

The examiner also asserts that Mayer discloses that "a binder such as water is added to the mixture" and then evaporated. To support this contention, the examiner points to Column 15, lines 40-61. However, the passage noted by the examiner references the use of deionized water to wash the ground pellets. Column 15, lines 52-56. The washed pellets are then vacuum dried to remove any water-soluble reactants or unwanted products. Column 15, lines 52-56. Moreover, the passage cited by the examiner describes an example of the synthesis of LiNiO_2 , and does not discuss making an active material with a chemical mixture of two different oxides. Mayer nowhere discloses the use of water as a binder, and nowhere discloses the use of a binder in the preparation of the active material, as claimed.

The examiner also maintained the rejection of claims 1-4 under 35 U.S.C. §103(a) as obvious over Pynenburg, et al. (U.S. Patent No. 5,429,890) in view of Hasegawa, et al. (U.S. Patent No. 5,370,948) as evidenced by Imachi (U.S. Patent No. 7,056,622). In maintaining this rejection, the examiner argues that Imachi provides evidence that lithium nickel manganese oxide has a higher discharge capacity at around 145 (est.) as compared to lithium manganese oxide at around 120 (est.). The examiner relies on this disclosure in Imachi and the disclosure in Pynenburg that cell capacity is proportional to the area under the curve of the differential cell capacity dQ/dV vs. voltage in arguing that it would have taken only routine experimentation to determine the claimed ratio of oxides. However, Imachi has an effective date of May 31, 2002, well after the priority date and U.S. filing date of the present application. As such, the examiner's reliance on this reference appears improper.

Notwithstanding the improper use of Imachi in maintaining this rejection, Imachi fails to disclose the unexpected results achieved from the claimed mixture of oxides. In particular, while

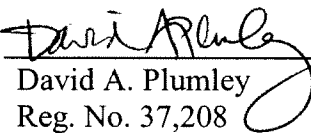
Imachi may disclose that the discharge capacity of lithium manganese oxide is lower than that of lithium nickel manganese oxide, Imachi nowhere describes the mid-discharge voltages and thermal stabilities. As noted in the specification, at page 13, line 1 to page 17 line 1, the cells having ratios of oxides within the claimed range exhibited not only superior discharge capacities, but also superior thermal stabilities and mid-discharge voltages. Given these unexpected and superior results, the examiner's continued rejection of claims 1-4 is improper.

In addition, the examiner continues to argue that the Declaration filed on March 30, 2007 (i.e., the Declaration of Geun Bae Kim filed March 28, 2007)("the Declaration") is insufficient to establish unexpected and desirable results to overcome the rejection of claims 1-4. Specifically, the examiner asserts that the ratios presented in the Declaration are not representative of the claimed range. However, Table 2 of the present specification notes discharge capacities (in mAh/g) of 184, 167, 156 and 152 for positive active materials including the oxides in weight ratios within the claimed range. Additionally, the Declaration notes a discharge capacity (in mAh/g) of 179 for a positive active material including the oxides in a weight ratio of 2/8 (inside the claimed range) and a discharge capacity of 142 for a positive active material including the oxides in a weight ratio of 6/4 (outside the claimed range). In addition, as noted above, the specification notes superior mid-discharge voltages and thermal stabilities of the positive active materials including the oxides in a ratio within the claimed range. Because the specification and the Declaration together provide several weight ratios of the oxides for comparison, the Declaration taken together with the specification constitutes sufficient evidence to establish unexpected results. Given the unexpected results achieved by including the lithium manganese oxides to the lithium nickel manganese oxides in a weight ratio within the claimed range, claims 1-4 are allowable over Pynenburg, Hasegawa and Imachi.

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Reply to Office action of March 11, 2008

In view of the above, applicant submits that all of pending claims 1-4 and 11 are allowable over Idota. Applicant therefore respectfully requests reconsideration of the final rejection of the pending claims.

Respectfully submitted,
CHRISTIE, PARKER & HALE, LLP

By 
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Reg. No. 37,208
626/795-9900

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